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### ROTATING ELECTRIC MACHINES WITH MAGNETIC CIRCUIT FOR HIGH VOLTAGE AND METHOD FOR MANUFACTURING THE SAME

#### TECHNICAL FIELD

[0001] The invention relates to a rotating electric machine comprising a magnetic circuit with a magnetic core and a winding. Such electric machines comprise synchronous machines which are mainly used as generators for connection to distribution and transmission networks; commonly referred to below as power networks. The synchronous machines are also used as motors and for phase compensation and voltage control, in that case as mechanically idling machines. The technical field also comprises double-fed machines, asynchronous machines, asynchronous converter cascades, outer pole machines and synchronous flux machines.

[0002] The magnetic circuit referred to in this context comprises a magnetic core of laminated, normal or oriented, sheet or other, for example amorphous or powder-based, material, or any other action for the purpose of allowing an alternating flux, a winding, a cooling system, 'etc., and may be located in either the stator or the rotor of the machine, or in both.

[0003] The invention also comprises a method for manufacturing a magnetic circuit for a rotating electric machine.

#### BACKGROUND ART, THE PROBLEM

[0004] in order to explain and describe the machine, a brief description of a rotating electric machine will first be given, exemplified on the basis of a synchronous machine. The first part of the description substantially relates to the magnetic circuit of such a machine and how it is constructed according to classical technique. Since the magnetic circuit referred to in most cases is located in the stator, the magnetic circuit below will normally be described as a stator